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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/816,502	03/31/2004	Robert P. Mcagley	42P18250	8625
8791	7590	04/06/2006	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN			LEE, SIN J	
12400 WILSHIRE BOULEVARD			ART UNIT	
SEVENTH FLOOR			PAPER NUMBER	
LOS ANGELES, CA 90025-1030			1752	

DATE MAILED: 04/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/816,502

Applicant(s)

MEAGLEY, ROBERT P.

Examiner

Sin J. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,9-12,14-21 and 25-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-6,9-12,14-21 and 32-34 is/are allowed.
- 6) ☒ Claim(s) 25-31 and 35-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

1. In view of the amendment of January 18, 2006, previous 103(a) rejection on claims 9 and 14-21 over Kolb et al'543 in view of Ho et al'493 and previous 103(a) rejection on claims 1, 9-12 and 14-21 over Liu et al'350 in view of Ho et al'493 are hereby withdrawn.

2. The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 35-37 have been renumbered as claims 36-38.

3. Due to new grounds of rejections, the following rejections are made *non-final*.

Claim Rejections - 35 USC § 112

4. Claims 35-38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 35, applicants are *claiming an intermediate product*, which is a composition containing a photoacid generator moiety, a photoimageable species, and a quencher, *as well as a final product*, which is the reaction products of a photoacid generator moiety, a photoimageable species, and a quencher. This is not allowed. Appropriate correction is required.

Claim Rejections - 35 USC § 103

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5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 25-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawabe et al (US 6,846,610 B2) in view of Ren et al ("Studies of Weakly Coordinating Anions Paired with Iodonium Cations", Macromolecules, vol.35, pg.1632-1637 (2002)).

Kawabe teaches a positive photosensitive resin composition containing an acid-labile polymer and a photoacid generator (see abstract). After applying his composition onto a substrate, Kawabe performs an exposure step (by using a light source such as ArF excimer laser, F₂ excimer laser, or electron-beam) and a development step (col.28, lines 40-47, col.29, lines 11-42). Also, Kawabe states (col.25, lines 33-36) that adding a low molecular acid-decomposable compound into his composition can produce improvement in *dry etching resistance* of his composition, and thus an etching step is implied in Kawabe's teaching. As one of the examples of his photoacid generator, Kawabe teaches diphenyliodonium hexafluoroantimonate (SbF₆⁻) (see col.22, lines 33-41). Kawabe does not teach present carborane-based photoacid generator. Ren teaches a photoacid generator which contains weakly coordinating anion, such as carborane, paired with iodonium cations (see abstract and Figure 1). Ren teaches that his photoacid generator is *similar to compounds containing SbF₆⁻ in both photoactivity and solubility*, whereas *SbF₆⁻ are often highly toxic and frequently somewhat hygroscopic* (see abstract and introduction). Therefore, it would have been obvious to one skilled in the art to use diphenyliodonium carborane (instead of diphenyliodonium hexafluoroantimonate) as Kawabe's photoacid generator because Ren teaches that his photoacid generator is similar to compounds containing SbF₆⁻ in both photoactivity and

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solubility, whereas SbF_6^- are often highly toxic and frequently somewhat hydroscopic. Therefore, Kawabe in view of Ren would render obvious present inventions of claims 25-31.

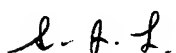
Allowable Subject Matter

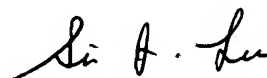
7. Claims 1-6, 9-12, 14-21 and 32-34 are allowed. Kawabe in view of Ren does not teach or suggest present carborane-based group which is functionalized on a carbon atom by a group that modifies the polarity of the anionic carborane.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sin J. Lee whose telephone number is 571-272-1333. The examiner can normally be reached on Monday-Friday from 9:00 am EST to 5:30 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly, can be reached on 571-272-1526. The fax phone number for the organization where this application or proceeding is assigned is **571-273-8300**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


S. Lee
April 3, 2006


SIN LEE
PRIMARY EXAMINER